



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,316	12/23/2004	Reinhold Bruecken	P-56 MG	9097
28752	7590	07/07/2005	EXAMINER LY, NGH I H	
LACKENBACH SIEGEL, LLP LACKENBACH SIEGEL BUILDING 1 CHASE ROAD SCARSDALE, NY 10583			ART UNIT 2686	PAPER NUMBER

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/519,316

Applicant(s)

BRUECKEN, REINHOLD

Examiner

Nghi H. Ly

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/11/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 04/11/2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Form 1449/PTO (Sheet 2 of 3), Cite No. I, fails to provide a legible copy of cited foreign patent document.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hokkanen (US 6,876,853) in view of Grubeck et al (US 6,154,657).

Regarding claim 1, Hokkanen teaches a method for carrying out a blind handover in an intersystem and interfrequency handover in mobile communication systems (see Abstract), one mobile station (30) being supplied with radio signals from several base stations (23, 24) (fig.1, see the zigzag signal from several base stations), that, based on the determined residence site (see column 3, lines 15-34), with the aid of a data base

Art Unit: 2686

(see fig.3, Memory 3, also see Location obtaining 1, Processing 2, and Measurement 6) at least one suitable base station (20) is selected for an intersystem or interfrequency handover (see column 7, line 47 to column 8, line 6), that the data of the selected base station (20) required for a handover are transmitted to the mobile station (see column 2, lines 24-28), and that the mobile station (30) carries out the handover to the selected base station (20) (see column 7, line 47 to column 8, line 6).

Hokkanen does not specifically disclose a propagation time measurement by the mobile station (30) is carried out at the air interface of the signals received by the base stations (23, 24), that the measured propagation times are transmitted to one of the base stations (23, 24), that on the part of the mobile communication network the residence site of the mobile station (30) is determined on the basis of the propagation time measurement data.

Grubeck teaches a propagation time measurement by the mobile station (30) is carried out at the air interface of the signals received by the base stations (23, 24) (see column 1, lines 28-40), that the measured propagation times are transmitted to one of the base stations (23, 24) (see column 1, lines 28-40), that on the part of the mobile communication network the residence site of the mobile station (30) is determined on the basis of the propagation time measurement data (also see column 1, lines 28-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Grubeck into the system of Hokkanen in order to calculate the actual position of the mobile station (see Grubeck, column 1, lines 28-40).

Regarding claim 2, Hokkanen and/or Grubeck further teaches the mobile (30) additionally the signal strength and/or the signal quality of the base stations (23, 24) are measured and transmitted to one of the base stations (see Hokkanen, column 1, lines 48-60 and/or see Grubeck, column 1, line 67 to column 2, line 3, and column 5, lines 49-57).

Regarding claim 7, Hokkanen further teaches the precise residence site of the mobile station (30) is determined by means of a GPS receiver (see column 4, lines 46-49).

Regarding claim 10, Hokkanen further teaches during the handover the mobile station (30) changes from a base station (24) of a first mobile communication system to a base station (20) of a second mobile communication system (see Abstract and fig.1).

Regarding claim 11, Hokkanen further teaches during the handover the mobile station (30) changes from a base station (24) of a first mobile communication system to a base station (20) of a second mobile communication system (see Abstract and fig.1).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hokkanen (US 6,876,853) in view of Grubeck et al (US 6,154,657) and further in view of Henon (US 6,741,577).

Regarding claim 4, the combination of Hokkanen and Grubeck teaches claim 1. The combination of Hokkanen and Grubeck does not specifically disclose the mobile station (30) during the handover changes the utilized radio frequencies.

Art Unit: 2686

Henon teaches the mobile station (30) during the handover changes the utilized radio frequencies (see column 6, lines 11-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Henon into the system of Hokkanen and Grubeck so that dropped call are substantially eliminated (see Henon, Abstract).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hokkanen (US 6,876,853) in view of Grubeck et al (US 6,154,657) and further in view of Persson (US 5,487,174).

Regarding claim 5, the combination of Hokkanen and Grubeck teaches claim 1. The combination of Hokkanen and Grubeck does not specifically disclose the effective coverage range of the base station (24) supplying the mobile station before the handover differs from the effective coverage range of the base station (20) supplying the mobile station after the handover.

Persson teaches the effective coverage range of the base station (24) supplying the mobile station before the handover differs from the effective coverage range of the base station (20) supplying the mobile station after the handover (see column 8, lines 56-67 and Fig.2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Persson into the system of Hokkanen and Grubeck in order to handle a bidirectional connection involving a mobile

Art Unit: 2686

station in a cellular mobile radio communication system having adjacent cells of substantially different sizes (see Persson, Abstract).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hokkanen (US 6,876,853) in view of Grubeck et al (US 6,154,657) and further in view of Abrishamkar et al (US 6,829,485).

Regarding claim 6, the combination of Hokkanen and Grubeck teaches claim 1. The combination of Hokkanen and Grubeck does not specifically disclose the effective coverage range of the base station (24) supplying the mobile station before the handover overlaps the effective coverage range of the base station (20) supplying the mobile station after the handover.

Persson teaches the effective coverage range of the base station (24) supplying the mobile station before the handover overlaps the effective coverage range of the base station (20) supplying the mobile station after the handover (see column 4, lines 26-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Abrishamkar into the system of Hokkanen and Grubeck in order to provide receivers for demodulating quick paging channels in communications system (see Abrishamkar, column 1, lines 9-13).

Art Unit: 2686

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hokkanen (US 6,876,853) in view of Grubeck et al (US 6,154,657) and further in view of Yamamoto (US 6,477,183).

Regarding claim 8, the combination of Hokkanen and Grubeck teaches claim 1. The combination of Hokkanen and Grubeck does not specifically disclose a central clock a frame synchronization is carried out between the participating base stations (23, 24).

Yamamoto teaches a central clock a frame synchronization is carried out between the participating base stations (23, 24) (see column 2, lines 29-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Yamamoto into the system of Hokkanen and Grubeck in order to provide synchronization between base stations and prevent signals from being lost.

Regarding claim 9, the combination of Hokkanen, Grubeck and Yamamoto teaches discrepancies of the frame synchronization between the base stations (23, 24) are determined (see column 2, lines 29-31). The combination of Hokkanen, Grubeck and Yamamoto does not specifically disclose the frame between the base station are stored in a matrix and utilized for calculating the residence site of the mobile station (30). However, the Examiner takes Official notice that such feature as recited is very well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teaching of Hokkanen, Grubeck and

Art Unit: 2686

Yamamoto for providing a method as claimed, for calculating the residence site of the mobile station.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Dixon (US 5,850,600) teaches three cell wireless communication system.
- b. Halonen (US 6,816,729) teaches handover method.
- c. Kumar (US 6,073,021) teaches robust CDMA handoff.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2686

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

NHL
07/01/03

Marsha D Banks-Harold
MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600